

WE CLAIM:

1. A polyethylene plexifilamentary fiber strand having a surface area of less than 10 m²/g and a crush value of at least 1 mm/g.

2. The plexifilamentary fiber strand of claim 1 wherein the surface area of 5 the strand is less than 8 m²/g.

3. The plexifilamentary fiber strand of claim 1 wherein the surface area of the strand is less than 5 m²/g.

4. The plexifilamentary fiber strand of claim 1 wherein the crush value of the strand is at least 1.5 mm/g.

10 5. A nonwoven sheet comprised of substantially continuous polyethylene plexifilamentary fiber strands and having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 2 cfm/ft².

15 6. A nonwoven sheet comprised of substantially continuous polyethylene plexifilamentary fiber strands and having a hydrostatic head of at least 110 cm and a Gurley Hill Porosity of less than 6 seconds.

7. The nonwoven sheet of claim 5 having a hydrostatic head of at least 30 cm.

8. The nonwoven sheet of claim 5 having a hydrostatic head of at least 45 cm.

20 9. The nonwoven sheet of claim 5 having a hydrostatic head of at least 75 cm.

10. The nonwoven sheet of claim 5 having a hydrostatic head of at least 85 cm.

25 11. The nonwoven sheet of claim 5 having a hydrostatic head of at least 100 cm.

12. The nonwoven sheet of claim 5 having a hydrostatic head of at least 130 cm.

13. The nonwoven sheet of claim 7 having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 4 cfm/ft².

14. The nonwoven sheet of claim 7 having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 8 cfm/ft².

5 15. The nonwoven sheet of claim 7 having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 10 cfm/ft².

16. The nonwoven sheet of claim 7 having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 15 cfm/ft².

10 17. The nonwoven sheet of claim 7 having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 20 cfm/ft².

18. The nonwoven sheet of claim 7 having a Frazier Permeability, normalized to 1.0 oz/yd² basis weight, of at least 25 cfm/ft².

15 19. The nonwoven sheet of claim 7 wherein the sheet is a unitary fibrous sheet.

20. A through-air bonded polyethylene plexifilamentary non-woven sheet.

21. The nonwoven sheet of claim 5 wherein said sheet has a whole surface bonded portion of a first side of the sheet and a point bonded portion on the second side of the sheet, said point bonded portion of the sheet comprising at least 50% by weight of the nonwoven sheet.

20 22. The nonwoven sheet of claim 21 wherein the point bonded portion of the sheet comprises at least 60% by weight of the nonwoven sheet.

23. The nonwoven sheet of claim 22 wherein the point bonded portion to the sheet is bonded with a ribbed bonding pattern and the whole surface bonded portion of the sheet is bonded with a linen pattern.

25 24. A garment comprised of the nonwoven sheet of claim 7.

25. Filter media comprised of the nonwoven sheet of claim 7 or claim 20.

26. A vacuum bag comprised of the nonwoven sheet of claim 5 or claim 20.

27. A pillow cover comprised of the nonwoven sheet of claim 5.

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